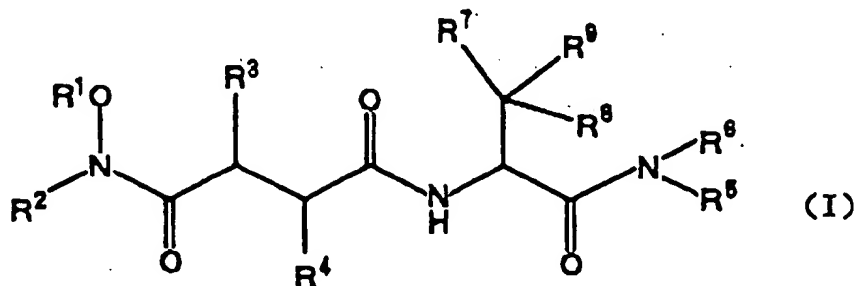


5. (Twice Amended) A metalloproteinase inhibitor which comprises an effective amount of at least a member selected from the group consisting of a compound of the formula (I):

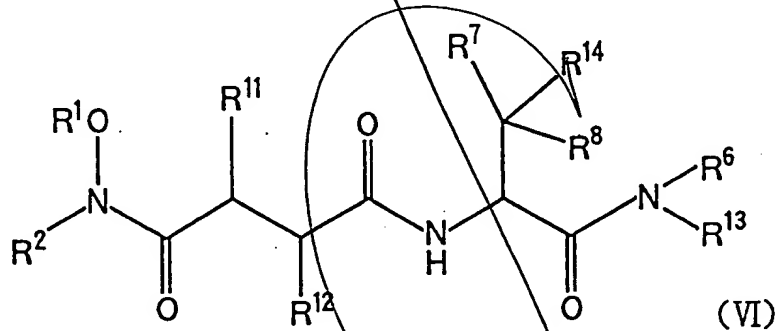


wherein R¹ to R⁹, all have the same meanings as defined in claim 16, and a pharmaceutically acceptable salt or solvate thereof.

B2

8. (Twice Amended) A method of prophylactically and/or therapeutically treating diseases and/or disorders associated with tissue degradation comprising administering an effective amount of the compound according to claim 16.

12. (Twice Amended) A compound having the following formula (VI):



wherein R¹, R², and R⁶ to R⁸, all have the same meanings as defined in claim 16,

B3
CO2H

R^{11} has the same meaning as defined for R^3 , or is selected from the group consisting of protected hydroxy, protected guanido-substituted phenyl-lower (C_1-C_4) alkyl, protected amino-substituted phenyl-lower (C_1-C_4) alkyl, nitro-substituted phenyl-lower (C_1-C_4) alkyl, protected amino-substituted (C_1-C_6) alkyl, nitro-substituted (C_1-C_6) alkyl, protected carboxy-substituted phenyl-lower (C_1-C_4) alkyl, protected hydroxy-substituted phenyl-lower (C_1-C_4) alkyl, protected guanido-substituted lower (C_1-C_4) alkyl-substituted phenyl-lower (C_1-C_4) alkyl, protected amino-substituted lower (C_1-C_4) alkyl-substituted phenyl-lower (C_1-C_4) alkyl, protected hydroxy-substituted lower (C_1-C_4) alkyl-substituted phenyl-lower (C_1-C_4) alkyl, protected carboxy-substituted lower (C_1-C_4) alkyl-substituted phenyl-lower (C_1-C_4) alkyl, protected hydroxy-containing (C_1-C_8) straight chain or branched alkyl, and cyano-substituted phenyl-lower (C_1-C_4) alkyl;

R^{12} has the same meaning as defined for R^4 , or is protected hydroxy-substituted (C_1-C_8) alkyl;

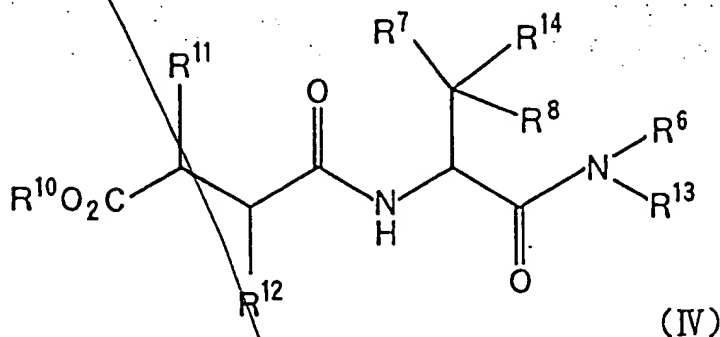
R^{13} has the same meaning as defined for R^5 , or is selected from the group consisting of protected carboxy-substituted lower (C_1-C_4) alkyl, protected hydroxy-substituted lower (C_1-C_4) alkyl, protected bis(phosphono)hydroxymethyl-substituted (C_1-C_{11}) alkyl, and a protected nitrogen-containing heterocyclic group; and

R^{14} has the same meaning as defined for R^9 , or is selected from the group consisting of protected amino, protected hydroxy, and a group of the formula: $-X-E$ or $-X-A-E$

wherein X and A, both have the same meanings as given above, and E is selected from the group consisting of nitro, cyano, amino, carboxyl, (C_1-C_{11}) hydroxyalkyl, protected amino, protected guanido, protected amidino, protected acylimido, protected benzimidoyl, protected bis(phosphono)methyl, protected bis(phosphono)hydroxymethyl, and protected (C_1-C_{11}) alkyl-substituted imidazol-3-yl;

or a salt thereof.

13. (Twice Amended) A compound having the following formula (IV):



wherein R^6 to R^8 , all have the same meanings as defined in claim 16,

R^{10} is selected from the group consisting of unsubstituted or optionally substituted alkyl, unsubstituted or optionally substituted aralkyl, and a carboxy-protecting group;

R^{11} has the same meaning as defined for R^3 , or is selected from the group consisting of protected hydroxy, protected guanido-substituted phenyl-lower (C_1-C_4) alkyl, protected amino-substituted phenyl-lower (C_1-C_4) alkyl, nitro-substituted phenyl-lower (C_1-C_4) alkyl, protected amino-substituted (C_1-C_6) alkyl, nitro-substituted (C_1-C_6) alkyl, protected carboxy-substituted phenyl-lower (C_1-C_4) alkyl, protected hydroxy-substituted phenyl-lower (C_1-C_4) alkyl, protected guanido-substituted lower (C_1-C_4) alkyl-substituted phenyl-lower (C_1-C_4) alkyl, protected amino-substituted lower (C_1-C_4) alkyl-substituted phenyl-lower (C_1-C_4) alkyl, protected hydroxy-substituted lower (C_1-C_4) alkyl-substituted phenyl-lower (C_1-C_4) alkyl, protected carboxy-substituted lower (C_1-C_4) alkyl-substituted phenyl-lower (C_1-C_4) alkyl, protected hydroxy-containing (C_1-C_8) straight chain or branched alkyl, and cyano-substituted phenyl-lower (C_1-C_4) alkyl;

R^{12} has the same meaning as defined for R^4 , or is protected hydroxy-substituted (C_1-C_8) alkyl;

bis(phosphono)methyl, protected bis(phosphono)hydroxymethyl,
and protected (C_1-C_{11}) alkyl-substituted imidazol-3-yl;

B3
COO4
 R^{13} has the same meaning as defined for R^5 , or is selected from the group consisting of protected carboxy-substituted lower (C_1-C_4) alkyl, protected hydroxy-substituted lower (C_1-C_4) alkyl, protected bis(phosphono)hydroxymethyl-substituted (C_1-C_{11}) alkyl, and a protected nitrogen-containing heterocyclic group; and

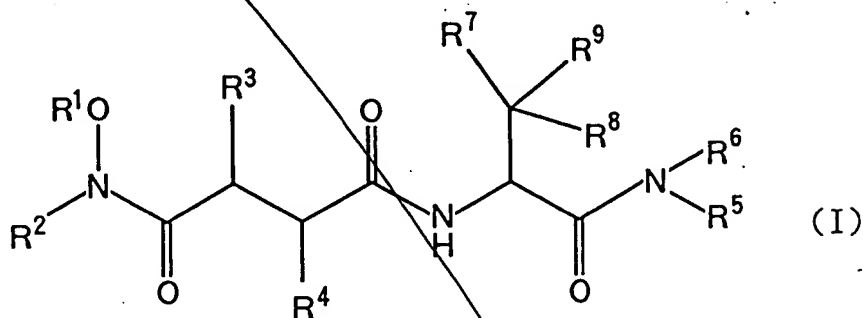
R^{14} has the same meaning as defined for R^9 , or is selected from the group consisting of protected amino, protected hydroxy, and a group of the formula: $-X-E$ or $-X-A-E$

wherein X and A, both have the same meanings as given above, and E is selected from the group consisting of nitro, cyano, amino, carboxyl, (C_1-C_{11}) hydroxyalkyl, protected amino, protected guanido, protected amidino, protected acylimido, protected benzimidoyl, protected

or a salt thereof.

Please add the following new claims:

16. A compound having the following formula (I):



wherein R^1 , R^2 , R^6 , R^7 and R^8 are each hydrogen,

1) R^3 is (C_1-C_9) alkyl,

R^4 is (C_3-C_9) alkyl,

R^5 is (C_1-C_4) alkyl,

R^9 is $-X-Y$, and Y is $-A-B$ or $-B$,

wherein X , Y , A and B are selected from the following combinations:

① X is (C_1-C_6) alkylene, Y is $-A-B$, A is imino and B is amidino;

② X is (C_1-C_6) alkylene, Y is $-B$ and B is amino;

③ X is phenylene, Y is $-A-B$, A is lower (C_1-C_4) alkylene-imino and B is lower (C_1-C_4) acylimidoyl;

④ X is (C_1-C_6) alkylene, Y is $-A-B$, A is imino and B is selected from the group consisting of lower (C_1-C_4) acylimidoyl and benzimidoyl;

⑤ X is phenylene, Y is $-A-B$, A is lower (C_1-C_4) alkyl and B is amino; and

⑥ X is phenylene, Y is $-A-B$, A is imino and B is selected from the group consisting of tetra-lower (C_1-C_4) alkyl bis(phosphono)methyl and tri-lower (C_1-C_4) alkyl

bis(phosphono)methyl;

- 2) R^3 is (C_1-C_9) alkyl,
 R^4 is (C_3-C_9) alkyl,
 R^5 is hydroxy-substituted (C_1-C_6) alkyl or a nitrogen-containing heterocyclic radical,
 R^9 is $-X-Y$, and Y is $-A-B$,
wherein X is (C_1-C_6) alkylene,
 A is imino and
 B is lower (C_1-C_4) acylimidoyl;

- 3) R^3 is (C_1-C_9) alkyl,
 R^4 is (C_3-C_9) alkyl,
① R^5 is (C_3-C_7) cycloalkyl,
 R^9 is $-X-Y$, and Y is $-B$,
wherein X is (C_1-C_6) alkylene and
 B is amino; or
② R^5 is a nitrogen-containing heterocyclic radical,
 R^9 is $-X-Y$, and Y is $-A-B$,
wherein X is phenylene,
 A is lower (C_1-C_4) alkylene-imino and
 B is lower (C_1-C_4) acylimidoyl;

- 4) R^3 is (C_1-C_9) alkyl,
 R^4 is (C_3-C_9) alkyl,
 R^5 is carboxy-substituted lower (C_1-C_4) alkyl, di-lower (C_1-C_4) alkylamino-substituted lower (C_1-C_4) alkyl or hydroxy-substituted (C_1-C_6) alkyl, and
 R^9 is $-X-Y$,
wherein X is phenylene and

Y is -A-B,

wherein A and B are selected from the following combinations:

- ① A is lower (C_1-C_4) alkylene-imino and
B is lower (C_1-C_4) acylimidoyl; and
② A is lower (C_1-C_4) alkylene and
B is amino;

5) R^3 is (C_1-C_9) alkyl,

R^4 is (C_3-C_9) alkyl,

① when R^5 is hydroxy-substituted (C_1-C_6) alkyl,

R^9 is -X-Y,

wherein X is phenylene and

Y is -A-B,

wherein

A is lower (C_1-C_4) alkylene-imino and

B is lower (C_1-C_4) acylimidoyl; or

② when R^5 is lower (C_1-C_4) alkyl,

R^9 is -X-Y,

wherein X is (C_1-C_6) alkylene and

Y is -A-B,

wherein A is imino and

B is amidino;

6) R^3 is phenyl-lower (C_1-C_4) alkyl,

R^4 is (C_3-C_9) alkyl,

① R^5 is lower (C_1-C_4) alkyl,

R^9 is -X-Y, and Y is -A-B,

wherein X is phenylene and

A is lower (C_1-C_4) alkylene and

B is amino; or

② R^5 is di-lower (C_1-C_4) alkylamino-substituted lower (C_1-C_4) alkyl, hydroxy-substituted (C_1-C_6) alkyl or lower (C_1-C_4) alkyl,

R^9 is -X-Y, and Y is -A-B,

wherein X is (C_1-C_6) alkylene and

A is imino and

B is lower (C_1-C_4) acylimidoyl;

7) R^3 is nitrogen-containing heterocyclic radical-substituted lower (C_1-C_4) alkyl, carboxy-substituted phenyl-lower (C_1-C_4) alkyl, amino-substituted lower (C_1-C_4) alkyl-substituted phenyl-lower (C_1-C_4) alkyl, hydroxy-substituted phenyl-lower (C_1-C_4) alkyl, lower (C_1-C_4) alkoxy-carbonyl-substituted phenyl-lower (C_1-C_4) alkyl, oxygen-containing (C_1-C_6) straight chain or branched alkyl, or hydroxy-substituted (C_1-C_8) alkyl;

R^4 is (C_3-C_9) alkyl,

R^5 is lower (C_1-C_4) alkyl,

R^9 is -X-Y, and Y is -B,

wherein X is trimethylene and

B is amino;

8) ① R^3 is (C_1-C_9) alkyl, and

R^4 is hydroxy-substituted (C_3-C_8) alkyl, or

② R^3 is nitrogen-containing heterocyclic radical-substituted lower (C_1-C_4) alkyl, and

R^4 is (C_3-C_9) alkyl,

R^5 is lower (C_1-C_4) alkyl,

R^9 is -X-Y, and Y is -B,

wherein X is (C_1-C_6) alkylene and

B is amino;

9) R^3 is amino-substituted lower (C_1-C_4) alkyl-substituted phenyl-lower (C_1-C_4) alkyl, lower (C_1-C_4) acylimido-ylimino-substituted (C_1-C_6) alkyl, lower (C_1-C_4) alkylimino-substituted (C_1-C_6) alkyl, nitrogen-containing heterocyclic radical-substituted lower (C_1-C_4) alkylimino-substituted (C_1-C_6) alkyl, or isopropyliminomethylbenzyl,

R^4 is (C_3-C_9) alkyl,

R^5 is lower (C_1-C_4) alkyl,

R^9 is hydrogen;

10) R^3 is aryloxy-substituted lower (C_1-C_4) alkyl, (C_3-C_7) cycloalkyl-substituted lower (C_1-C_4) alkyl, arylsulfonamido-substituted lower (C_1-C_4) alkyl-substituted phenyl-lower (C_1-C_4) alkyl, alkylsulfonamido-substituted lower (C_1-C_4) alkyl-substituted phenyl-lower (C_1-C_4) alkyl, or amino-substituted lower (C_1-C_4) alkyl-substituted phenyl-lower (C_1-C_4) alkyl,

R^4 is (C_3-C_9) alkyl,

R^5 is lower (C_1-C_4) alkyl,

R^9 is -X-Y, and Y is -A-B,

wherein X is (C_1-C_6) alkylene,

A is imino and

B is amidino;

11) R^3 is phenyl-lower (C_1-C_4) alkyl,

R^5 is lower (C_1-C_4) alkyl,

(i) when R^4 is (C_3-C_9) alkyl,

R^9 is -X-Y, and Y is -A-B,

wherein X is (C₁-C₆) alkylene,
A is imino and
B is amidino;

② when R⁴ is aryl-lower (C₁-C₄) alkyl,
R⁹ is -X-Y, and Y is -A-B,
wherein X is (C₁-C₆) alkylene,
A is imino and
B is amidino; or

③ when R⁴ is (C₃-C₉) alkyl,
R⁹ is -X-Y, and Y is -B,
wherein X is (C₁-C₆) alkylene, and
B is amino;

12) R³ is amino-substituted lower (C₁-C₄) alkyl-substituted
phenyl-lower (C₁-C₄) alkyl,

R⁴ is (C₃-C₉) alkyl,

R⁵ is lower (C₁-C₄) alkyl,

R⁹ is -X-Y, and Y is -B,

wherein X is (C₁-C₆) alkylene, and
B is amino;

13) R³ is amino-substituted phenyl-lower (C₁-C₄) alkyl,

R⁴ is (C₃-C₉) alkyl,

R⁵ is di-lower (C₁-C₄) alkylamino-substituted lower
(C₁-C₄) alkyl,

R⁹ is -X-Y, and Y is -A-B,

wherein X is (C₁-C₆) alkylene, and
A is imino and

B is lower (C₁-C₄) acylimidoyl;

14) R^3 is guanido-substituted phenyl-lower (C_1-C_4) alkyl,
guanido-substituted lower (C_1-C_4) alkyl-substituted
phenyl-lower (C_1-C_4) alkyl, or amino-substituted lower
(C_1-C_4) alkyl-substituted phenyl-lower (C_1-C_4) alkyl,

R^4 is (C_3-C_9) alkyl,

R^5 is lower (C_1-C_4) alkyl,

R^9 is -X-Y, and Y is -B,

wherein X is (C_1-C_6) alkylene, and

B is amino; or

15) R^3 is amino-substituted lower (C_1-C_4) alkyl-substituted
phenyl-lower (C_1-C_4) alkyl,

R^4 is (C_3-C_9) alkyl,

R^5 is lower (C_1-C_4) alkyl,

R^9 is -X-Y, and Y is -A-B,

wherein X is phenylene,

A is lower (C_1-C_4) alkylene, and

B is amino;

or a pharmaceutically acceptable salt or solvate thereof.

17. The compound according to claim 16 wherein

R^1 , R^2 , R^6 , R^7 and R^8 are each hydrogen,

1) R^3 is methyl,

R^4 is isobutyl,

R^5 is methyl,

R^9 is -X-Y and Y is -A-B or -B

wherein X, Y, A and B are selected from the following combinations:

- ① X is methylene or ethylene, Y is -A-B, A is imino and B is amidino;
- ② X is ethylene or trimethylene, Y is -B and B is amino;
- ③ X is phenylene, Y is -A-B, A is methyleneimino and B is acetimidoyl;
- ④ X is trimethylene, Y is -A-B, A is imino and B is selected from the group consisting of acetimidoyl, propionimidoyl and benzimidoyl;
- ⑤ X is phenylene, Y is -A-B, A is methylene and B is amino; and
- ⑥ X is phenylene, Y is -A-B, A is imino and B is selected from the group consisting of tetra-ethyl bis(phosphono)methyl, tetra-methyl bis(phosphono)methyl, tri-ethyl bis(phosphono)methyl and tri-methyl bis(phosphono)methyl;

2) R^3 is methyl,

R^4 is isobutyl,

R^5 is 2-hydroxy-1-methylethyl or piperidyl,

R^9 is -X-Y, and Y is -A-B,

wherein X is trimethylene,

A is imino and

B is acetimidoyl;

3) R^3 is methyl,

R^4 is isobutyl,

① R^5 is cyclopropyl,

R^9 is -X-Y, and Y is -B,
wherein X is ethylene and
B is amino;

② R^5 is morpholino,

R^9 is -X-Y, and Y is -A-B,
wherein X is phenylene,

A is methyleneimino and
B is acetimidoyl;

R^3 and R^4 are each isobutyl,

R^5 is 2-carboxyethyl, 2-dimethylaminoethyl or
2-hydroxyethyl,

R^9 is -X-Y,

wherein X is phenylene and
Y is -A-B,

wherein A and B are selected from the following
combinations:

① A is methyleneimino and
B is acetimidoyl; and

② A is methylene and
B is amino;

5) R^3 and R^4 are each isobutyl,

① when R^5 is 2-hydroxy-1,1-dimethylethyl,

R^9 is -X-Y,

wherein X is phenylene and

Y is -A-B,

wherein A is methyleneimino and
B is acetimidoyl;

② when R⁵ is methyl,

R⁹ is -X-Y,

wherein X is methylene or ethylene and

Y is -A-B,

wherein A is imino and

B is amidino;

6) R³ is phenylpropyl,

R⁴ is isobutyl,

① R⁵ is methyl,

R⁹ is -X-Y, and Y is -A-B,

wherein X is phenylene and

A is methylene and

B is amino; or

② R⁵ is 2-dimethylaminoethyl, 2-hydroxyethyl or methyl,

R⁹ is -X-Y, and Y is -A-B,

wherein X is trimethylene,

A is imino and

B is acetimidoyl;

7) R³ is morpholinopropyl, carboxyphenylpropyl,
aminomethylphenylpropyl, hydroxyphenylpropyl,
methoxycarbonylphenylpropyl, piperidinylpropyl,
iso-butyloxyethyl, butoxyethyl, ethoxyethoxyethyl or
hydroxyoctyl,

R⁴ is isobutyl,

R⁵ is methyl,

R⁹ is -X-Y, and Y is -B,

wherein X is trimethylene and

B is amino;

- 8) ① R^3 is isobutyl, and
 R^4 is hydroxyoctyl, or
② R^3 is (3,4,4-trimethyl-2,5-dioxo-imidazolidin-1-yl)-
propyl, and
 R^4 is isopropyl,
 R^5 is methyl,
 R^9 is -X-Y, and Y is -B,
wherein X is trimethylene and
B is amino;

- 9) R^3 is aminomethylphenylpropyl, aminomethylbenzyl,
acetimidoyliminopentyl, isopropyliminopentyl,
(pyridin-4-ylmethylimino)pentyl or
isopropyliminomethylbenzyl,
 R^4 is isobutyl,
 R^5 is methyl, and
 R^9 is hydrogen;

- 10) R^3 is phenoxyethyl, cyclohexylpropyl, toluenesulfonamido-
methylbenzyl, methanesulfonamidomethylbenzyl or
phthalimidomethylbenzyl,
 R^4 is isobutyl,
 R^5 is methyl, and
 R^9 is -X-Y, and Y is -A-B,
wherein X is ethylene,
A is imino and
B is amidino;

- 11) R^3 is phenylpropyl,
 R^5 is methyl,
① when R^4 is isobutyl,
 R^9 is -X-Y, and Y is -A-B,
wherein X is methylene,
A is imino and
B is amidino;

5UB
C1
COO4.

② when R^4 is naphthylmethyl,
 R^9 is -X-Y, and Y is -A-B,
wherein X is ethylene,
A is imino and
B is amidino; or

③ when R^4 is isopropyl,
 R^9 is -X-Y, and Y is -B,
wherein X is trimethylene, and
B is amino;

12) R^3 is aminomethylphenylpropyl,

B4
COO4.

① R^4 is isobutyl,
 R^5 is methyl,
 R^9 is -X-Y, and Y is -B,
wherein X is methylene or ethylene, and
B is amino;

② R^4 is isopropyl,
 R^5 is methyl,
 R^9 is -X-Y, and Y is -B,
wherein X is ethylene, and
B is amino;

13) R^3 is aminophenylpropyl,
 R^4 is isobutyl,
 R^5 is dimethylaminoethyl,
 R^9 is -X-Y, and Y is -A-B,
wherein X is trimethylene, and
A is imino and
B is acetimidoyl;

14) R^3 is guanidinophenylpropyl, guanidomethylphenylpropyl or aminomethylbenzyl,

R^4 is isobutyl,

R^5 is methyl, and

R^9 is -X-Y, and Y is -B,

wherein X is ethylene, and

B is amino; or

15) R^3 is aminomethylbenzyl,

R^4 is isobutyl,

R^5 is methyl, and

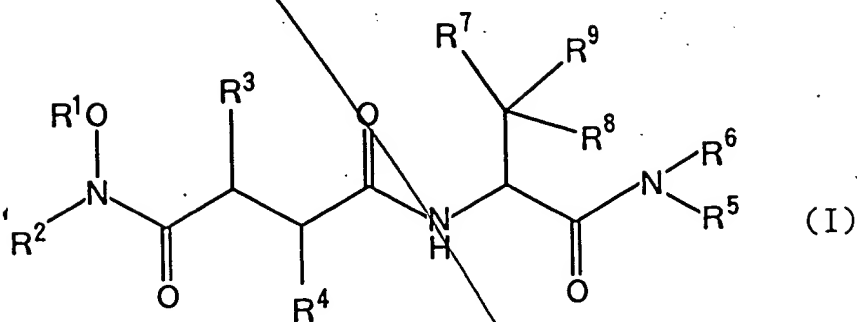
R^9 is -X-Y, and Y is -A-B,

wherein X is phenylene,

A is methylene, and

B is amino.

18. A compound having the following formula (I):



wherein R^1 , R^2 , R^6 , R^7 and R^8 are each hydrogen,

1) R^3 is methyl,

R^4 is isobutyl,

R^5 is methyl,

R^9 is -X-Y, and Y is -A-B or -B,

wherein X, Y, A and B are selected from the following combinations:

- BY
COND.
- ① X is (C_1-C_6) alkylene, Y is -A-B, A is imino and B is amidino;
 - ② X is (C_1-C_6) alkylene, Y is -B and B is amino;
 - ③ X is phenylene, Y is -A-B, A is methyleneimino and B is acetimidoyl;
 - ④ X is trimethylene, Y is -A-B, A is imino and B is selected from the group consisting of lower (C_1-C_4) acylimidoyl and benzimidoyl;
 - ⑤ X is phenylene, Y is -A-B, A is methylene and B is amino; and
 - ⑥ X is phenylene, Y is -A-B, A is imino and B is selected from the group consisting of tetra-lower (C_1-C_4) alkyl bis(phosphono)methyl and tri-lower (C_1-C_4) alkyl bis(phosphono)methyl;

- 2) R^3 is methyl,
 R^4 is isobutyl,
 R^5 is 2-hydroxy-1-methylethyl or piperidyl,
 R^9 is -X-Y, and Y is -A-B,

wherein X is trimethylene,

A is imino and

B is acetimidoyl;

- 3) R^3 is methyl,

R^4 is isobutyl,

① R^5 is cyclopropyl,

R^9 is -X-Y, and Y is -B,

wherein X is ethylene and

B is amino;

② R^5 is morpholino,

R^9 is -X-Y, and Y is -A-B,

wherein X is phenylene,

A is methyleneimino and

B is acetimidoyl;

- 4) R^3 and R^4 are each isobutyl,

R^5 is 2-carboxyethyl, 2-dimethylaminoethyl or
2-hydroxyethyl,

R^9 is -X-Y,

wherein X is phenylene and

Y is -A-B,

wherein A and B are selected from the following
combinations:

① A is methyleneimino and

B is acetimidoyl; and

② A is methylene and

B is amino;

5) R^3 and R^4 are each isobutyl,

① when R^5 is 2-hydroxy-1,1-dimethylethyl,

R^9 is -X-Y,

wherein X is phenylene and

Y is -A-B,

wherein A is methyleneimino and

B is acetimidoyl;

SUB
C1
COND
② when R^5 is methyl,

R^9 is -X-Y,

wherein X is (C_1-C_6) alkylene and

Y is -A-B,

wherein A is imino and

B is amidino;

6) R^3 is phenylpropyl,

R^4 is isobutyl,

BY
COND
① R^5 is methyl,

R^9 is -X-Y, and Y is -A-B,

wherein X is phenylene and

A is methylene and

B is amino; or

② R^5 is 2-dimethylaminoethyl, 2-hydroxyethyl or methyl,

R^9 is -X-Y, and Y is -A-B,

wherein X is trimethylene,

A is imino and

B is acetimidoyl;

7) R^3 is nitrogen-containing heterocyclic radical-substituted propyl, carboxyphenylpropyl, aminomethylphenylpropyl, hydroxyphenylpropyl, methoxycarbonylphenylpropyl, oxygen-containing (C_1-C_6) straight chain or branched alkyl or hydroxyoctyl,

R^4 is isobutyl,

R^5 is methyl,

R^9 is -X-Y, and Y is -B,

wherein X is trimethylene and
B is amino;

- 8) ① R^3 is isobutyl, and
 R^4 is hydroxyoctyl, or
② R^3 is (3,4,4-trimethyl-2,5-dioxo-imidazolidin-1-yl)-
propyl, and
 R^4 is isopropyl,
 R^5 is methyl,
 R^9 is -X-Y, and Y is -B,
wherein X is trimethylene and
B is amino;

- 9) R^3 is amino-substituted methyl-substituted phenyl-lower
(C_1-C_4) alkyl, acetimidoyliminopentyl,
isopropyliminopentyl, (pyridin-4-ylmethylimino)pentyl
or isopropyliminomethylbenzyl,
 R^4 is isobutyl,
 R^5 is methyl, and
 R^9 is hydrogen;

- 10) R^3 is phenoxyethyl, cyclohexylpropyl, toluenesulfonamido-
methylbenzyl, methanesulfonamidomethylbenzyl or
phthalimidomethylbenzyl,
 R^4 is isobutyl,
 R^5 is methyl, and
 R^9 is -X-Y, and Y is -A-B,
wherein X is ethylene,
A is imino and
B is amidino;

11) R^3 is phenylpropyl,
 R^5 is methyl,

① when R^4 is isobutyl,
 R^9 is -X-Y, and Y is -A-B,
wherein X is methylene,
A is imino and
B is amidino;

② when R^4 is naphthylmethyl,
 R^9 is -X-Y, and Y is -A-B,
wherein X is ethylene,
A is imino and
B is amidino; or

③ when R^4 is isopropyl,
 R^9 is -X-Y, and Y is -B,
wherein X is trimethylene, and
B is amino;

12) R^3 is aminomethylphenylpropyl,
 R^4 is (C_3-C_9) alkyl,
 R^5 is methyl,
 R^9 is -X-Y, and Y is -B,
wherein X is (C_1-C_6) alkylene, and
B is amino;

13) R^3 is aminophenylpropyl,
 R^4 is isobutyl,
 R^5 is dimethylaminoethyl,
 R^9 is -X-Y, and Y is -A-B,
wherein X is trimethylene, and
A is imino and
B is acetimidoyl;

- 14) R^3 is guanidinophenylpropyl, guanidomethylphenylpropyl
or aminomethylbenzyl,
 R^4 is isobutyl,
 R^5 is methyl, and
 R^9 is -X-Y, and Y is -B,
wherein X is ethylene, and
B is amino; or
- 15) R^3 is aminomethylbenzyl,
 R^4 is isobutyl,
 R^5 is methyl, and
 R^9 is -X-Y, and Y is -A-B,
wherein X is phenylene,
A is methylene, and
B is amino;

or a pharmaceutically acceptable salt or solvate thereof.